LONG-TIME BEHAVIOR OF SOLUTIONS OF HAMILTON-JACOBI EQUATIONS WITH NEUMANN TYPE BOUNDARY CONDITIONS

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We discuss the long-time behavior of solutions of the convex Hamilton-Jacobi equation $u_t + H(x, Du) = 0$ in a bounded domain $\Omega$ of $\mathbb{R}^n$ with the Neumann type boundary condition $D_\gamma u = g$, where $\gamma$ is a vector field on the boundary $\partial \Omega$ pointing a direction oblique to $\partial \Omega$. We explain a convergence result to asymptotic solutions together with some related results concerning is the stationary problem associated with $u_t + H(x, Du) = 0$ is: $H(x, Dv) = c$ in $\Omega$ and $D_\gamma v = 0$ on $\partial \Omega$, where the pair, $v \in C(\bar{\Omega})$ and $c \in \mathbb{R}$, is the unknown.